pixel block data relating to size, position, brightness and color. Alternatively, the associated brightness and color stream data may be provided separately from the pixel block data, though read at block **1802** in conjunction with reading the pixel block data. Once the pixel block data is read at block **1804**, the correction routine **1800** may apply the correction code.

[0136] At block **1806**, the correction routine **1800** may determine if there is an image code to apply to the pixel block. The image code may include both an offset code and a correction value, which if applied, may offset the pixel block image to another video scan address and vary the size of the image to correct for image distortion. A flag may be used to indicate the absence of any image code, in which case the correction routine **1800** transfers control to block **1812**. If there is an image code to apply, control may be passed to block **1808** where the offset value is read and applied to the pixel block to vary its displayed location. Control may then pass to block **1810**, during which a correction value may be applied to vary the shape and size of the pixel block, and hence vary the video scan address. An example of an offset value and a correction value and how they affect the pixel block may be seen with reference to **FIG. 22**. In some cases, the pixel block may not require an offset or a correction value. For those codes not in use, the codes may be set to zero and the correction routine **1800** may apply the codes at blocks **1808** and **1810**, though there is no effect on the pixel block. Following the application of the offset value at block **1808** and the correction value at block **1810**, control may be transferred to block **1812**.

[0137] At block **1812**, the correction routine may determine whether there is a brightness code to apply to the pixel block to correct for brightness distortion. If not, a flag may be set to indicate the absence of a code and control may pass to block **1816**. If there is a brightness code, even if the code is set to zero, the code may be applied to the pixel block at block **1814**. The brightness data of the pixel block may include, or otherwise be associated with, control data that determines how much light the cell(s) of each module **1210**, **1212**, **1214** are to reflect. The application of a brightness value at block **1814** may therefore vary the control data to cause the particular cell(s) to reflect more or less light as needed. As mentioned above, the control data, and thereby the brightness value, may have a component for each of the RGB colors. It may be desirable to apply blocks **1812** and **1814** after applying the offset and correction value above, because changing the position of the pixel block may also change the cell(s) that will be displaying the pixel block. The brightness value may therefore be dynamic to compensate for a change in position, size or shape, because brightness distortions may occur on the basis of a particular cell position (i.e., brightness distortion always occurs on the same area of the three-dimensional display screen **1500** which is related to a particular cell(s)).

[0138] Following the determination at block **1812** or the application of a brightness code at block **1814**, control may pass to block **1816** to determine if a color code is to be applied to the pixel block to adjust the color stream data to correct for color aberrations. If not, a flag may be set and control may pass to block **1820**. If there is a color code, even if set to zero, control may pass to block **1818** where the color code is applied to the color stream data. Because the color stream data may have a component for each of the RGB

colors, the color code may likewise have a component for each of the RGB colors. The color code may be associated with a particular pixel block, a particular cell(s) of the micro-display modules **1210**, **1212**, **1214** or both. The application of the color code at block **1818** may therefore be dependent on the offset value and correction value applied above, and therefore dynamic to compensate for a change in position, size or shape. Alternatively, the predetermined image codes may be used to predetermine the color codes, After the application of the color code at block **1818**, control may pass to block **1820**.

[0139] Block **1820** of the correction routine may cause the corrected pixel block to be stored in the image buffer **1340**. Generally, the corrected pixel block may be stored in the same location as the original pixel block to maintain image integrity, though it will be displayed at a video scan address as determined at blocks **1806**, **1808** and **1810**. Because a delay may be involved, as mentioned above, the corrected pixel block is stored at block **1820**, until it is ready to be displayed. Meanwhile, control may pass back to block **1802** to pre-fetch the next correction code for the next pixel block data to be corrected for display. As mentioned above, the corrections performed during the correction routine **1800** may only be applied to a single line of pixels at a time, which may not be the entire pixel block. The corrected pixel block data may therefore include only corrected pixel block data for those pixels to be displayed, and the same correction code and remaining pixel block data may be read at blocks **1802** and **1804** for further correction.

[0140] At block **1822**, the imaging processor **1330** may cause the corrected pixel block to be transferred to the micro-display drive **1360** for transmission of non-planar, three-dimensional video image data to the micro-display engine **1200** via the I/O circuit **108** and data cables **1700**. In some cases, the color stream data and brightness data may be stored and provided separately from the pixel block. Likewise, corrected color stream data and corrected brightness data may be stored and provided separately from the corrected pixel block, though all three may be corrected in conjunction with one another. The correction routine **1800** may include re-combining the corrected color stream data, corrected brightness data and corrected pixel block data at block **1822**, while also parsing out various components for control over each micro-display module **1210**, **1212**, **1214**, such as parsing out the corrected brightness and corrected color stream data to the various red, green and blue micro-display modules **1210**, **1212**, **1214**. While block **1822** may be performed by the imaging processor **1330**, one or more of these functions may also be carried out by the micro-display drive **1360** or I/O circuit **108** at the control of the imaging processor. The resulting combination of corrected pixel block data, corrected color stream data and corrected brightness data is part of a large matrix of data relating to a frame of a non-planar, three-dimensional video signal that, when projected on a three-dimensional display screen **1500**, may be viewed as a non-planar, three-dimensional video image with little or no distortion.

[0141] Returning to **FIG. 21**, the imaging processor **1330** may add the color stream data and brightness data (which may be modified based on the brightness and color corrections), covert the pixel address to row and column addresses for display by the micro-display engine **1200** (if the image resolution and micro-display module resolution are differ-